

Amendment for Specification

Claims

We claim:

1. (Currently amended) One apparatus, called Personal Mobile Companion (*PMC*), ~~allows the use of land-line house telephone or like device to carry out phone conversation that is originated in RF mode and aimed for mobile telephone or like device, as shown in Fig. 1.~~ for use in routing mobile phone incoming call to a connected land-line house telephone, as shown in Fig. 1, and is connecting to: a mobile phone headphone output port to receive ringer and voice AC signals from the connected mobile phone as input; a land-line telephone set with output, from the apparatus, that includes DC voltage needed for activating the land-line telephone set, AC voltage cycles needed to drive the ringer in the land-line telephone set, and AC voltage for voice conversation; a regular house power outlet to receive power needed for voltage drivers, shown in Fig. 2B, to split house AC power into an 8V DC and an 11V DC power outputs for a connected land-line telephone and other functional components in the claimed apparatus.
2. (Currently amended) ~~One or more circuitry~~ The apparatus component called ring tone circuit controller, as part of elements claimed in claim 1, to generate the ring tone sequence signal, upon activation by mobile telephone ring signal, shown in the block diagram of Fig. 2C with connection to mobile phone headphone outlet in order to activate the ringer in land-line telephone set, and shown in the block diagram of Fig. 2C, which connects to voltage drivers for an 11V DC power supply; to a mobile phone headphone output for a 3V AC signal input; to land-line telephone set with a 12V AC ringer cycles when mobile phone receives incoming call and with a 3V AC signal for phone conversation, and is comprised of: one Ring Tone Generator (*RTG*) that is connected to a headphone outlet of a mobile phone which, upon receiving an incoming call, sends out a 3V AC signal to activate the generation of a 6 seconds high-low voltage cycles to drive the ringer of a connected land-line telephone; and one Impedance Variation Detector (*IVD*) that, upon detecting line resistance variation caused by lifting or hanging-up land-line telephone handset, switches the 11V DC power supply to the *RTG* unit to silence the land-line telephone ringer or to get ready for an incoming 3V AC signal to drive the 6 seconds voltage cycles needed to set off land-line telephone ringer.

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3. (Currently amended) ~~One or more circuitry apparatus, as part of elements claimed in claim 1, to detect resistance variation caused by land-line telephone set in order to control power supply for generating ringer signal in land-line telephone set.~~ The circuitry design, as part of circuitry elements included in the *IVD* unit claimed in claim 2 and shown in Fig. 3E, which is used to detect resistance variation caused by lifting or hanging-up land-line telephone handset in order to control 11V DC power supply to the *RTG* module through a mechanical relay, and is comprised of: one high pass filter design, consist of one resistor 45, one induction coil 46, and one capacitor 47, to attenuate any low frequency signal in human voice domain; two capacitors, 49 and 51, to remove high frequency background noise; one pair of diode, 48 and 52, to regulate current direction and make parasitic AC voltage into positive; and one differential amplifier 59 to drive the connected mechanical rely unit.

4. (Currently amended) ~~One or more circuitry apparatus, as part of elements claimed in claim 2, to transform ring tone signal from mobile phone onto the power supply needed for activating the clock signal generator circuitry claimed in claim 2.~~ The circuitry design, as part of circuitry elements included in claim 2 and shown in Fig. 3D, which is used to connect 11V DC power supply to a clock generator upon detecting a 3V AC signal input from mobile phone, and it includes: one ring tone trigger circuitry design, as shown in Fig. 3G, that is made of a pair of emitter and receiver diodes to detect 3V AC signal input from mobile phone, a transistor to eliminate low frequency analog signal, a diode to regulate current direction, a high frequency filtering capacitor, a pair of voltage stabilizing zener diodes, and a MOSFET transistor to turn on the connection for 11V DC power supply, through a mechanical relay, to a clock generator; one normally ON mechanical relay that is placed between one *IVD* and one *RTG* units, as shown in Fig. 3E and stated in Claim 2, and is made of one inductor and three terminals to switch off the 11V DC power supply after the *IVD* unit detects the connected phone line resistance variation.

5. (Currently amended) A method of using ~~an utility box~~ the claimed apparatus, as stated in claim 1, to connect the an analog signal output from mobile phone unit and convert it-as-the into an analog input needed for land-line telephone set to carry out phone conversation- through the following sequences: the first, connect the claimed apparatus to a earplug outlet of mobile phone

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for signal input; the second, connect the claimed apparatus to a land-line telephone set to send out DC power needed to activate the land-line telephone set; the third, detect an input AC signal from mobile phone earplug to activate *RTG* circuitry designed, as stated in claim 4, in order to generate 6 seconds high-low voltage cycles to drive land-line telephone ringer; the fourth, detect resistance variation in connected line after the land-line handset is picked up using the *IVD* circuitry design, as stated in claim 3, to switch power supply to *RTG* module to stop a ring voltage cycles to the land-line telephone; the fifth, the claimed apparatus, as stated in claim 1, now provides a path for a 3V AC voice signal between mobile phone and land-line telephone to carry out voice communication; the sixth, detect resistance variation in connected line after the land-line telephone handset is hang-up, at end of phone conversation, using the *IVD* circuitry design, as stated in claim 3, to switch power supply to *RTG* module to be ready for generating a ring voltage cycles to the land-line telephone; the seventh, the apparatus is in ready mode, awaiting for an input AC signal from mobile phone earplug, to repeat the sequences from the third to the sixth.

6. (Currently amended) A method of using the claimed apparatus, ~~or like device,~~ following the first, the second, the fifth, the sixth, and the seventh steps stated in claim 5, to serve as the an analog signal path for phone conversation on ~~the a~~ caller side after the caller initiates number dialing to ~~the a~~ receiving party and answered by the receiving party.

7. (Cancelled) ~~A method of applying the claimed apparatus in combination with a cordless telephone and its subset(s) within a specified, effective distance of the cordless telephone unit to carry out phone conversation without the use of house build-in land-line wiring.~~